

# **EPA Superfund Explanation of Significant Differences:**

**MOYERS LANDFILL  
EPA ID: PAD980508766  
OU 01  
EAGLEVILLE, PA  
01/03/2000**

# **Explanation of Significant Differences**

## **Moyer Landfill Site**

### **Montgomery County, Pennsylvania**

#### **I. Introduction**

This Explanation of Significant Differences (ESD) has been prepared by the U.S. Environmental Protection Agency Region III (EPA), to describe a potential change in a portion of the selected remedial action, the method of leachate treatment, at the Moyer Landfill Site located in Lower Providence Township in Montgomery County, Pennsylvania (“the Site”). EPA is the lead agency for Site activities and the Pennsylvania Department of Environmental Protection (PADEP) is the support agency for the Site. The change described in this ESD is contingent on the satisfaction, by May 31, 2000, of certain conditions described more fully below, including, but not limited to, the construction of a municipal interceptor by Montgomery County and the Township of Lower Providence, and the commitment by the Commonwealth of Pennsylvania to design and construct a leachate collection and transfer system to carry leachate to a Publicly Owned Treatment Works (POTW) via the municipal interceptor. The Record of Decision (ROD) for the Site was signed on September 30, 1985. This ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended, commonly known as Superfund, 42 U.S.C. § 9617(c), and 40 CFR § 300.435(c)(2)(i).

The leachate treatment method selected in the ROD required the construction of a leachate treatment facility on-site; this ESD contingently selects treatment of the leachate at a POTW. The remedial action contingently selected by the ESD for the leachate treatment was originally described, in several variations, in both Remedial Action Alternatives #2 and #4 in the ROD. EPA’s contingent decision to change this portion of the remedial action is based upon a request made by PADEP during an April 26, 1999 meeting with the EPA, and in a follow-up letter dated June 24, 1999. PADEP has explained its preference for treatment of the leachate at a POTW based upon the following:

- Recent flow data indicates that the leachate treatment plant, as currently designed, is not suitably sized to handle existing and projected leachate flows from the landfill and could thus result in significant operation and maintenance difficulties.
- Treatment and disposal of leachate from the landfill into the POTW will better protect the waters of the Commonwealth and the environment from potential failures of an undersized treatment plant.
- A contract has been awarded to construct a sewer main on Arcola Road which is in close proximity to the Site.
- The right-of-way between the landfill and the sewer main has been surveyed and

access to the property can be secured by the Commonwealth pursuant to State authority.

- Routing the leachate discharged from the Moyer Landfill to a public sewer line is now more cost effective than building and operating a leachate treatment facility and equally effective in the treatment of the leachate.

This contingent action is protective of human health and the environment, and complies with Federal and State applicable or relevant and appropriate requirements (ARARs) for this action in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621.

PADEP requested the contingent change and has concurred with the ESD, as noted in a letter dated December 23, 1999.

This document presents a synopsis of information regarding the Site, a summary of the contingent change to the remedy selection in the ROD for leachate treatment, and a summary of the conditions to be satisfied in order for the change described in this ESD to become effective. The ESD will become part of the Administrative Record file pursuant to 40 CFR § 300.825(a)(2), which includes the complete documentation relating to the Moyer Landfill Site. A copy of the Administrative file is located at:

U.S. Environmental Protection Agency  
1650 Arch Street  
Philadelphia, Pennsylvania 19103  
215-814-3157

And

Lower Providence Township Building  
100 Parklane Drive  
Eagleville, PA 19403

## **II. Site History, Contamination Problems, and Selected Remedy**

The Moyer Landfill Site is a 65 acre inactive privately owned landfill located at Moyer Road, Collegeville, Lower Providence Township in Montgomery County, Pennsylvania. The landfill is bounded on the north and west by Evansburg State Park, to the east by land owned by Howard and Catherine Moyer and Providence Builders, Inc., and on the south by land also owned by Providence Builders Inc. and Charles Leonard. The landfill was formally closed in April 1981, after operating nearly 40 years.

The Site had been operated as a municipal landfill from the early 1940s until April 1981, during which time it received municipal waste, sewage, and industrial sludges. The landfill accepted a variety of solid and liquid hazardous wastes, including polychlorinated biphenyls (PCBs), dioxins, solvents, paints, low-level radioactive wastes, and incinerated materials in bulk form and/or containerized drums. The original unlined landfill area was approximately 39 acres in size. In the late 1970s, the landfill owners submitted a request to expand the landfill boundaries to the northwest. Site preparation work began on a new area in 1977, and included installation of an asphalt liner prior to filling. Landfilling was reportedly limited to this new, lined area from the late 1970s to early 1981, at which time an order from the Pennsylvania Department of Environmental Resources (now PADEP) closed the facility.

There were numerous seeps at the Site. Eighty-six organic priority pollutants and sixteen priority pollutant metals were observed in the samples taken from the Site prior to remediation. On and off-site groundwater, the leachate, soil, and surface water (Skeppack Creek) were contaminated with heavy metals and volatile organic compounds (VOCs) from waste disposal activities. PCBs have been found in the trout in Skeppack Creek. Leachate and affected sediments contain substantial levels of contaminants and, therefore, may pose risks to individuals who accidentally ingest, inhale, or come into direct contact with them. Drinking contaminated groundwater or consuming contaminated trout from Skeppack Creek also may pose significant threats.

Groundwater was not the direct vehicle of contaminant transport from the Site because the groundwater level is lower than the bottom of the landfill. The transport of contamination was mostly due to surface water percolation through unlined portions of the landfill, some of which migrated into the groundwater. The contaminants at the Site were transported directly to the surface water (Skeppack Creek, which is a tributary to the Perkiomen Creek) via surface water runoff and indirectly through contaminated groundwater from the upper aquifer discharged to the creeks. The lower aquifer was not contaminated.

On September 30, 1985, the Regional Administrator signed the ROD for the Site which required the following remedial actions:

- Soil cover with a permeability range of  $10^{-4}$  to  $10^{-5}$  cm/sec
- Erosion and sedimentation control measures
- Surface water diversion
- Leachate collection, treatment and discharge
- Methane gas recovery and sale
- Security/fencing measures
- Groundwater monitoring
- All closure activities in compliance with RCRA at conclusion of gas generation phase (10 to 20 years)

The implementation of this remedy alternative depended on the success of the gas generation/recovery program and the contributions from generators and other potentially

responsible parties. If the methane recovery alternative failed, the ROD identified a contingent alternative, which was ultimately used, as follows:

- Miscellaneous work preparatory to installation of RCRA cap: grading, flattening of steep slopes, construction of retaining walls and installation of rip-rap at areas that are most likely to be eroded
- Gas venting and gas monitoring
- Surface water collection and discharge to Skippack Creek
- Leachate collection and treatment that will meet the discharge requirements in the stream and limit the risk of adverse health effects from groundwater consumption to one in one million
- Operation and Maintenance: ground and surface water monitoring, maintenance of the cap and treatment of leachate

The installation and shake down period of the RCRA cap, which was the contingent remedy in the ROD, was completed in May 1996. The leachate treatment portion of the remedy was not constructed at that time.

### **III. Description of Significant Differences and the Basis for those Differences; Circumstances under which Contingent Remedy will be Implemented**

EPA is issuing this ESD to describe a contingent change in the selected remedial action from leachate collection with treatment on-site to leachate collection with treatment at an existing POTW. The contingent remedial action was originally described in Alternatives #2 and #4 in the ROD. The actual treatment of the leachate will be similar to the original remedy selected except that it will be conducted off-site. The action is protective of human health and the environment, and complies with Federal and State applicable or relevant and appropriate requirements.

The overall strategy at the Moyer Landfill Site is to mitigate and minimize harm to public health and the environment. This should include minimizing further upper aquifer contamination and the possibility of direct contact with the waste. The major objectives for remedial action are to mitigate or eliminate environmental contamination through collecting and treating leachate from the landfill and capping the Site, which has been completed, to control leachate generation and soil erosion. Leachate control is an integral part of the overall scheme in order to eliminate the continuing migration of contaminants across the Site and off the Site to the Skippack Creek.

At the time the ROD was signed in 1985, the option to discharge the leachate to a POTW was not practical or cost effective because the infrastructure was not available. Since that time, a contract has been awarded for the construction of the sewer main on Arcola Road, which is in close proximity to the Site. PADEP has obtained information from Lower Providence Township, the Montgomery County Sewer Authority, and the Oaks Treatment Plant confirming that the infrastructure and capacity will be available to make a sewer hook-up for treatment of the

leachate until it is no longer necessary.

PADEP conducted a present worth analysis for the leachate treatment facility on-site and for treatment at the POTW. Their 30-year present worth analysis resulted in a present worth for the leachate treatment plant of \$3,344,250 and a present worth of the leachate treatment at the POTW of \$1,151,351. The leachate treatment at the POTW would be more cost effective.

The change to the leachate treatment method in the selected remedy described in this ESD is contingent on the fulfillment of all of the following requirements to EPA's satisfaction by May 31, 2000. These requirements were previously set forth in a letter from EPA to PADEP dated September 9, 1999. With respect to these requirements, the Commonwealth has addressed its commitments in a letter dated September 17, 1999. In addition, EPA will design and construct an equalization tank at the landfill for leachate storage.

- The Commonwealth of Pennsylvania ("the Commonwealth") shall commit in writing to make all modifications to the existing remedy, to properly design and construct the leachate collection and transfer system that will carry leachate to the municipal "interceptor" pipe, and to ensure that the leachate collection and transfer system operates properly. The municipal interceptor will carry the leachate to the Oaks Sewage Treatment Plant.
- The Commonwealth shall obtain all necessary access and permits to construct the leachate collection and transfer system.
- The municipal interceptor shall be built and functioning properly.
- The Commonwealth shall enter into all long-term contracts needed for treatment of landfill leachate at the Oaks Sewage Treatment Plant. It is EPA's understanding that two separate contracts will be needed: one with the Montgomery County Sewer Authority (MCSA) and a second with Lower Providence Township. EPA further understands that MCSA will require a one-time, lump sum payment in connection with the contract and that Lower Providence will require annual payments in addition to a one-time lump sum payment. The Commonwealth shall make these payments.
- Receipt by EPA of a letter from a person with proper authority over the Oaks Sewage Treatment Plant which states that, based on current and past data, the Oaks Sewage Treatment Plant will not, at present, require pre-treatment of the leachate (i.e., treatment of leachate before it enters the Oaks Sewage Treatment Plant). EPA has received a copy of such a letter, written by the engineer for the Oaks Sewage Treatment Plant, dated August 3, 1999.

- The Commonwealth shall commit in writing to assume all responsibility, financial and otherwise, for any treatment of Moyer Landfill leachate that may be required in the future. This includes: (1) performing any pre-treatment of leachate that may be required in the future to send leachate to the Oaks Sewage Treatment Plant; and (2) constructing, operating and maintaining an on-site leachate treatment plant if any of the conditions above are not fulfilled by May 31, 2000, or the leachate collection and transfer system is not constructed by July 31, 2000, and operating properly, following a one year shake down period, by July 31, 2001.

#### **IV. Support Agency Comments**

PADEP was provided with a copy of the proposed ESD, and provided concurrence in a letter dated December 23, 1999. EPA issued the ESD in response to PADEP's request made during an April 26, 1999 meeting with the EPA, and in a follow-up letter dated June 24, 1999.

#### **V. Affirmation of Statutory Determinations**

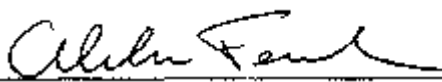
EPA believes that the ESD remedy is protective of human health and the environment, and complies with Federal and State applicable or relevant and appropriate requirements in accordance with Section 121 of CERCLA, 42 U.S.C. § 9621.

The public participation requirements set out at 40 CFR § 300.435(c)(2)(i) have been met. A copy of this ESD has been placed in the Administrative Record which is available for public review at the locations listed above in Section I of this ESD, and a notice summarizing the ESD was published in *The Philadelphia Inquirer*.

#### **VI. Signature**

U.S. ENVIRONMENTAL PROTECTION AGENCY

1/3/2000  
Date

  
Abraham Ferdas, Director  
Hazardous Site Cleanup Division